STIC Search Report
EIC 3600

STIC Database Tracking Number: 104245

TO: Naoko Slack **Location: Pk. 5, 6B19** **Art Unit: 3635** **Monday, September 22, 2003** **Case Serial Number: 10/000283**	**From: Caryn Wesner-Early** **Location: EIC 3600** **PK5-Suite 804** **Phone: 306-5967** **caryn.wesner@uspto.gov**

Search Notes

Thanks for the great color-coded drawing! I wish everyone took such care to make sure the concepts are clear. I hope I found what you need, but if a modification or re-focus of this search is needed, please let me know.

Caryn S. Wesner-Early, MSLS
Technical Information Specialist
EIC 3600, US Patent & Trademark Office
Phone: (703) 306-5967
Fax: (703) 306-5758
caryn.wesner@uspto.gov

STIC Search Results Feedback Form

EIC 3600

Questions about the scope or the results of the search? Contact ***the EIC searcher or contact:***

Karen Lehman, EIC 3600 Team Leader
306-5783, PK5- Suite 804

Voluntary Results Feedback Form

- *I am an examiner in Workgroup:* ☐ *Example: 3620 (optional)*

- *Relevant prior art **found**, search results used as follows:*
  - ☐ 102 rejection
  - ☐ 103 rejection
  - ☐ Cited as being of interest.
  - ☐ Helped examiner better understand the invention.
  - ☐ Helped examiner better understand the state of the art in their technology.

  Types of relevant prior art found:
  - ☐ Foreign Patent(s)
  - ☐ Non-Patent Literature
    (journal articles, conference proceedings, new product announcements etc.)

- *Relevant prior art **not found:***
  - ☐ Results verified the lack of relevant prior art (helped determine patentability).
  - ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to EIC3600 PK5 Suite 804

```
?show files;ds
File 348:EUROPEAN PATENTS 1978-2003/Sep W02
         (c) 2003 European Patent Office
File 349:PCT FULLTEXT 1979-2002/UB=20030918,UT=20030911
         (c) 2003 WIPO/Univentio
File 347:JAPIO Oct 1976-2003/May(Updated 030902)
         (c) 2003 JPO & JAPIO
File 351:Derwent WPI 1963-2003/UD,UM &UP=200360
         (c) 2003  Thomson Derwent
File 371:French Patents 1961-2002/BOPI 200209
         (c) 2002 INPI.  All rts. reserv.

Set     Items   Description
S1         13   AU='DORR K'
S2          1   AU='DORR KARL'
S3          1   AU='DORR KARL WERNER DIPL ING'
S4          5   AU='WERNER DORR'
S5         50   AU='FINGER U':AU='FINGER ULRICH'
S6      44281   IC=(E04D-013? OR E04H-014? OR H01L-025? OR H01N-006?)
S7          1   (S1 OR S5) AND S6
S8          8   S2 OR S3 OR S4 OR S7
S9          8   IDPAT (sorted in duplicate/non-duplicate order)
S10         7   IDPAT (primary/non-duplicate records only)
```

10/3,K/1 (Item 1 from file: 351)
DIALOG(R)File 351:Derwent WPI
(c) 2003 Thomson Derwent. All rts. reserv.

014938550 **Image available**
WPI Acc No: 2002-759259/200282
XRPX Acc No: N02-597814
Sheet metal panel for use as e.g. roof covering panel, is attached with plane photovoltaic elements with electric connecting cables, through cold bond adhesive
Patent Assignee: THYSSEN BAUSYSTEME GMBH (THYS); DORR K (DORR-I); FINGER U (FING-I)
Inventor: DOERR K; **FINGER U ; DORR K**
Number of Countries: 027 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20020112419	A1	20020822	US 2001283	A	20011115	200282 B
EP 1234926	A1	20020828	EP 2001104104	A	20010221	200282

Priority Applications (No Type Date): EP 2001104104 A 20010221
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20020112419	A1		4	E04D-013/18	
EP 1234926	A1	G		E04D-003/35	

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR

...Inventor: **FINGER U** ...

... **DORR K**
...International Patent Class (Main): **E04D-013/18**

10/3,K/2 (Item 2 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2003 European Patent Office. All rts. reserv.

00295121
Method for producing a flat moulded thermoplastic article, and apparatus for carrying out this method.
Verfahren zum Herstellen eines flachen Formteils aus einem thermoplastischen Kunststoff und Vorrichtung zur Durchfuhrung des Verfahrens.
Procede de fabrication d'une piece moulee plate en matiere thermoplastique et appareil pour realiser ce procede.
PATENT ASSIGNEE:
Karl Dorr Kartonagen-Hinterkappen, (998920), Am Naturheil 2, D-6780 Pirmasens, (DE), (applicant designated states: AT;DE;ES;FR;GB;IT)
INVENTOR:
Dorr, Hans-Joachim, Am Hasenweg 3a, D-6780 Pirmasens, (DE)
Dorr, Karl , Am Hasenweg 3a, D-6780 Pirmasens, (DE
LEGAL REPRESENTATIVE:
Schmidt-Evers, Jurgen, Dipl.-Ing. (10431), , , ( )
PATENT (CC, No, Kind, Date): EP 300435 A2 890125 (Basic)
EP 300435 A3 901227
APPLICATION (CC, No, Date): EP 88111627 880719;
PRIORITY (CC, No, Date): DE 3724458 870723
DESIGNATED STATES: AT; DE; ES; FR; GB; IT
INTERNATIONAL PATENT CLASS: B29C-043/22; B29C-059/04;
TRANSLATED ABSTRACT WORD COUNT: 116
ABSTRACT WORD COUNT: 107

LANGUAGE (Publication,Procedural,Application): German; German; German
FULLTEXT AVAILABILITY:
Available Text Language Update Word Count

```
      CLAIMS A    (German)  EPABF1      692
      SPEC A      (German)  EPABF1     3225
Total word count - document A          3917
Total word count - document B             0
Total word count - documents A + B     3917

INVENTOR:
...  DE)
   Dorr, Karl ...
```

10/3,K/3 (Item 3 from file: 371)

000446499

Title: Support d'elements de serrure pour machines a tricoter, en particulier pour machines a tricoter circulaires

Patent Applicant/Assignee: WIRKMASCHINENBAU KARL MARX STADT

Inventor(s): **Werner Dorr** ; Gunter Beyer; Heinz Mutze

Document Type: Patent / Brevet

Patent and Priority Information (Country, Number, Date):

Patent:	FR 2255407 - 19750718
Application:	FR 7441787 - 19741218
Priority Application:	DD 175524 - 19731220

Legal Status (Type, Action Date, BOPI No, Description):

Publication	19750718	7529	Date published
Search Report	19780317	7811	Date Search Report published
Grant	19780713	7828	Date granted
Lapse	19810831		Date lapsed

Inventor(s): **Werner Dorr** ...

10/3,K/4 (Item 4 from file: 371)

000405431

Title: Serrure pour metiers a tricoter en particulier pour metiers a tricoter circulaires.

Patent Applicant/Assignee: WIRKMASCHINENBAU KARL MARX STADT

Inventor(s): Heinz Mutze; **Werner Dorr** ; Gunter Beyer

Legal Representative: CABINET MADEUF

Document Type: Patent / Brevet

Patent and Priority Information (Country, Number, Date):

Patent:	FR 2214302 - 19740809
Application:	FR 7344140 - 19731211
Priority Application:	DD 167530 - 19721214

Legal Status (Type, Action Date, BOPI No, Description):

Publication	19740809		Date published
Grant	19740809	7432	Date granted
Register ZZ			Inscription
Lapse	19790831		Date lapsed

...Inventor(s): **Werner Dorr**

10/3,K/5 (Item 5 from file: 371)

000402152

Title: Serrure pour metiers a tricoter, en particulier metiers a tricoter circulaires.

Patent Applicant/Assignee: WIRKMASCHINENBAU KARL MARX STADT

Inventor(s): Heinz Mutze; **Werner Dorr** ; Gunter Beyer

Legal Representative: CABINET MADEUF

Document Type: Patent / Brevet

Patent and Priority Information (Country, Number, Date):

Patent:	FR 2211018 - 19740712
Application:	FR 7343772 - 19731207

Priority Application: DD 167532 - 19721214

Legal Status (Type, Action Date, BOPI No, Description):
Publication 19740712 Date published
Grant 19740712 7428 Date granted
Lapse 19820831 Date lapsed

...Inventor(s): **Werner Dorr**

10/3,K/6 (Item 6 from file: 371)
000402151
Title: Dispositif pour faire varier la longueur des mailles sur des metiers a tricoter circulaires.
Patent Applicant/Assignee: WIRKMASCHINENBAU KARL MARX STADT
Inventor(s): Heinz Mutze; **Werner Dorr** ; Gunter Beyer
Legal Representative: CABINET MADEUF
Document Type: Patent / Brevet
Patent and Priority Information (Country, Number, Date):
Patent: FR 2211017 - 19740712
Application: FR 7342778 - 19731130
Priority Application: DD 167531 - 19721214

Legal Status (Type, Action Date, BOPI No, Description):
Publication 19740712 Date published
Grant 19740712 7428 Date granted
Lapse 19820730 Date lapsed

...Inventor(s): **Werner Dorr**

10/3,K/7 (Item 7 from file: 371)
000270215
Title: Dispositif pour interrompre la commande des guide-fil et des cames de cueillage de machines a tricoter rectilignes
Patent Applicant/Assignee: WIRKMASCHINENBAU K MARX
Inventor(s): **Werner Dorr** ; Dietrich Cotte; Werner Schubert
Legal Representative: CABINET MADEUF
Document Type: Patent / Brevet
Patent and Priority Information (Country, Number, Date):
Patent: FR 2080353 - 19711112
Application: FR 7042729 - 19701127
Priority Application: DD - 19700223

Legal Status (Type, Action Date, BOPI No, Description):
Publication 19711112 Date published
Grant 19711112 7145 Date granted
Register ZZ Inscription
Lapse 19751203 Date lapsed

Inventor(s): **Werner Dorr** ...

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?show files;ds
File 179:Architecture DB 1987-2003/Jul
         (c) 2003 Royal Inst. of Brit. Architects
File  35:Dissertation Abs Online 1861-2003/Aug
         (c) 2003 ProQuest Info&Learning
File  65:Inside Conferences 1993-2003/Sep W3
         (c) 2003 BLDSC all rts. reserv.
File   8:Ei Compendex(R) 1970-2003/Sep W2
         (c) 2003 Elsevier Eng.  Info. Inc.
File  58:GeoArchive 1974-2003/Jun
         (c) 2003 Geosystems
File 292:GEOBASE(TM) 1980-2003/Sep
         (c) 2003 Elsevier Science Ltd.
File  89:GeoRef 1785-2003/Sep B1
         (c) 2003 American Geological Institute
File 118:ICONDA-Intl Construction 1976-2003/Aug
         (c) 2003 Fraunhofer-IRB
File  94:JICST-EPlus 1985-2003/Sep W3
         (c)2003 Japan Science and Tech Corp(JST)
File  29:Meteor.& Geoastro.Abs. 1970-2002/Jul
         (c) 2002 Amer.Meteorological Soc.
File   6:NTIS 1964-2003/Sep W2
         (c) 2003 NTIS, Intl Cpyrght All Rights Res
File 144:Pascal 1973-2003/Sep W2
         (c) 2003 INIST/CNRS
File 323:RAPRA Rubber & Plastics 1972-2003/Sep
          (c) 2003 RAPRA Technology Ltd
File  34:SciSearch(R) Cited Ref Sci 1990-2003/Sep W2
         (c) 2003 Inst for Sci Info
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
         (c) 1998 Inst for Sci Info
File   9:Business & Industry(R) Jul/1994-2003/Sep 19
         (c) 2003 Resp. DB Svcs.
File 111:TGG Natl.Newspaper Index(SM) 1979-2003/Sep 18
         (c) 2003 The Gale Group
File 399:CA SEARCH(R) 1967-2003/UD=13913
         (c) 2003 American Chemical Society

Set     Items   Description
S1      98561   (SOLAR OR SUN()POWER?? OR PHOTOVOLTAIC)()(CELL OR BATTER???
             OR AGGREGAT??? OR GATHER??? OR COLLECT???)
S2     160456   COLD()BOND OR BITUMINOUS OR BITUMEN? OR ASPHALT OR TAR OR -
             TARRY OR RESINOUS
S3    1672402   ADHESIVE? ? OR FUS??? OR GLUE? ? OR CEMENT?? OR (STICK??? -
             OR STUCK)()(TO OR TOGETHER) OR MUCILAGE OR MASTIC OR PASTE OR
             EPOXY
S4    3552296   (CABLE? ? (NOT 2N)(TV OR TELEVISION) NOT CATV) OR CORD? ? -
             OR LINE? ? OR FILAMENT? ? OR WIRE? ? OR COAX OR CO()AX OR COA-
             XIAL OR CO()AXIAL
S5     899608   IMPERVIOUS OR IMPENETRABLE OR SEAL??? OR IMPERMEABLE OR PR-
             OOF OR NONPOROUS OR NON()POROUS OR PLUGG??? OR INSULAT???
S6    1337120   OPENING? ? OR HOLE? ? OR APERTURE? ? OR ORIFICE? ? OR GAP?
             ? OR INTERSTIC??? OR INTERSPACE? ?
S7       7449   S2(3N)S3
S8          0   S1(10N)S7
S9       9216   S5(3N)S6
S10       291   S4(10N)S9
S11         0   S8(S)S10
S12         0   S1(S)S7
S13      8154   S2(5N)S3
S14         0   S1(S)S13
S15        31   S1(S)S2
S16         3   S3 AND S15
S17         0   S1(S)S10
S18         0   S1 AND S10
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S19	12490	S5(5N)S6
S20	33	S1 AND S19
S21	13	S1(S)S19
S22	3	S1(10N)S19
S23	16	S16 OR S21
S24	14	S23 NOT PY>2001
S25	14	S24 NOT PD=20010222:20031031
S26	12	RD (unique items).

26/3,K/1 (Item 1 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

04589067 E.I. No: EIP97013484451
Title: MS prime S - an alternative structure for MOS type solar cells
Author: Bhatnagar, P.K.; Bhatnagar, Mona
Corporate Source: Univ of Delhi, New Delhi, India
Source: Physica Status Solidi (A) Applied Research v 158 n 1 Nov 1996. p K9-K12
Publication Year: 1996
CODEN: PSSABA ISSN: 0031-8965
Language: English

Abstract: The possibility of constructing subgrade **insulator** from wide-**gap** semiconductor layers with thickness smaller than the Debye screening distance has been shown. The best...

...that the above property of wide-gap semiconductors can be used to replace a MOS **solar cell** structure by a MS prime S **solar cell** . Further, for photovoltaic applications this layer should transmit sufficient light to the substrate. 14 Refs.

26/3,K/2 (Item 2 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

04397030 E.I. No: EIP96053163305
Title: Cheap effective thermal solar-energy collectors
Author: Highgate, D.J.; Probert, S.D.
Corporate Source: Cranfield Univ, Bedfordshire, UK
Source: Applied Energy v 53 n 4 Apr 1996. p 349-363
Publication Year: 1996
CODEN: APENDX ISSN: 0306-2619
Language: English

Abstract: A light-weight flexible **solar - collector** , with a wavelength-selective absorption surface and an insolation-transparent thermal- **insulation** protector for its **aperture** , was built and tested. Its cheapness and high performance, relative to a conventional flat-plate **solar - collector** , provide a prima-facie case for the more widespread adoption of its design. (Author abstract...

26/3,K/6 (Item 6 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

01362133 E.I. Monthly No: EI8306048233 E.I. Yearly No: EI83090368
Title: MULTIPLE LAYER SOLAR COLLECTOR.
Author: Kenna, J. P.
Corporate Source: Univ Coll, Solar Energy Unit, Cardiff, Wales
Source: Solar Energy v 30 n 3 1982 p 225-235
Publication Year: 1982
CODEN: SRENA4 ISSN: 0038-092X
Language: ENGLISH

Abstract: The Multiple Layer **Solar Collector** described is a proposed design in which the working liquid passes through several successive transparent...

...the selective surface collector. A further design is considered in which two liquid layers are **insulated** with an air **gap** . 8 refs.

26/3,K/8 (Item 2 from file: 6)
DIALOG(R)File 6:NTIS
(c) 2003 NTIS, Intl Cpyrght All Rights Res. All rts. reserv.

0058729 NTIS Accession Number: N66-11228/XAB
Investigation of Resinous **Materials for Use as** Solar Cell **Cover Glass** Adhesive
Haynos, J. G.
National Aeronautics and Space Administration. Goddard Space Flight Center, Greenbelt, Md.
Report No.: NASA-TM-X-55333; X-716-65-369
Sep 65 19p
Journal Announcement: USGRDR6401; STAR0402
Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
NTIS Prices: PC A02/MF A01

Investigation of Resinous **Materials for Use as** Solar Cell **Cover Glass** Adhesive
Descriptors: **Adhesive** ; *Glass; *Polymer; *Solar cell; *Space environment; Bonding; Cell; Condition; Cover; Environment; Launch; Material ; Orbital; Prelaunch...

26/3,K/10 (Item 1 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)
(c) 2003 American Chemical Society. All rts. reserv.

135275308 CA: 135(19)275308h JOURNAL
A study on a new structure of semiconductor-insulator-semiconductor (S(p+n)IS(n)) solar cell
AUTHOR(S): Debnath, Doyananda; Khan, Mohammad Rezaul Huque
LOCATION: Department of Physics, University of Chittagong, Chittagong, Bangladesh, 4331
JOURNAL: J. Bangladesh Acad. Sci. DATE: 2001 VOLUME: 25 NUMBER: 1
PAGES: 1-8 CODEN: JBACDF ISSN: 0378-8121 LANGUAGE: English
PUBLISHER: Bangladesh Academy of Sciences

26/3,K/11 (Item 2 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)
(c) 2003 American Chemical Society. All rts. reserv.

131103124 CA: 131(8)103124w PATENT
Solar battery modules and solar battery-attached exterior insulating bodies
INVENTOR(AUTHOR): Inoue, Yuji; Shiomi, Tetsu; Sasaoka, Makoto; Toyomura, Fumitaka; Kataoka, Ichiro
LOCATION: Japan,
ASSIGNEE: Canon K. K.
PATENT: Japan Kokai Tokkyo Koho ; JP 99193613 A2 ; JP 11193613 DATE: 19990721
APPLICATION: JP 98752 (19980106)
PAGES: 13 pp. CODEN: JKXXAF LANGUAGE: Japanese CLASS: E04D-013/18A; E04D-003/40B; H01B-003/44B; H01L-031/042B

26/3,K/12 (Item 3 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)
(c) 2003 American Chemical Society. All rts. reserv.

66086326 CA: 66(20)86326h TECHNICAL REPORT

Resinous materials for use as solar cell cover glass adhesive
AUTHOR(S): Haynos, Joseph G.
JOURNAL: NASA (Nat. Aeronaut. Space Admin.) Access. DATE: 1965 NUMBER: NASA-TM-X-55333 PAGES: 19 pp. CODEN: NAACAF LANGUAGE: English
CITATION: Sci. Tech. Aerospace Rept. 1966, 4(2), N66 11228 AVAIL: CFSTI

26/AA,AN,TI/1 (Item 1 from file: 8)
DIALOG(R)File 8:(c) 2003 Elsevier Eng. Info. Inc. All rts. reserv.

04589067
E.I. No: EIP97013484451
Title: MS prime S - an alternative structure for MOS type solar cells

26/AA,AN,TI/2 (Item 2 from file: 8)
DIALOG(R)File 8:(c) 2003 Elsevier Eng. Info. Inc. All rts. reserv.

04397030
E.I. No: EIP96053163305
Title: Cheap effective thermal solar-energy collectors

26/AA,AN,TI/3 (Item 3 from file: 8)
DIALOG(R)File 8:(c) 2003 Elsevier Eng. Info. Inc. All rts. reserv.

03468090
E.I. Monthly No: EI9208106229
Title: Optimization of thickness of air gap **and back heat** insulation **of a flat** solar collector .

26/AA,AN,TI/4 (Item 4 from file: 8)
DIALOG(R)File 8:(c) 2003 Elsevier Eng. Info. Inc. All rts. reserv.

01804827
E.I. Monthly No: EI8510095130
Title: AVERAGE ENERGY GAPS AND PHOTOCONDUCTING APPLICATIONS OF SOME COMPLICATED SEMICONDUCTORS.

26/AA,AN,TI/5 (Item 5 from file: 8)
DIALOG(R)File 8:(c) 2003 Elsevier Eng. Info. Inc. All rts. reserv.

01774357
E.I. Monthly No: EI8507059934
Title: COMPARISON OF THE PHOTOVOLTAIC AND ELECTROLUMINESCENT EFFECTS IN GaP/LANGMUIR-BLODGETT FILM DIODES.

26/AA,AN,TI/6 (Item 6 from file: 8)
DIALOG(R)File 8:(c) 2003 Elsevier Eng. Info. Inc. All rts. reserv.

01362133
E.I. Monthly No: EI8306048233
Title: MULTIPLE LAYER SOLAR COLLECTOR.

26/AA,AN,TI/7 (Item 1 from file: 6)
DIALOG(R)File 6:(c) 2003 NTIS, Intl Cpyrght All Rights Res. All rts. reserv.

NTIS Accession Number: DE95717333
Solvaegshus med integreret varmeanlaeg. Maalinger og beregninger. (Solar-walled house with integrated heating system. Measurements and calculations)

26/AA,AN,TI/8 (Item 2 from file: 6)
DIALOG(R)File 6:(c) 2003 NTIS, Intl Cpyrght All Rights Res. All rts. reserv.

NTIS Accession Number: N66-11228/XAB
Investigation of Resinous **Materials for Use as** Solar Cell **Cover Glass** Adhesive

26/AA,AN,TI/9 (Item 1 from file: 34)
DIALOG(R)File 34:(c) 2003 Inst for Sci Info. All rts. reserv.

04973559
Title: SELECTION OF OPTIMAL MIXING RATIOS TO OBTAIN SUITABLE PHOTOELECTRODES FROM MIXED SEMICONDUCTORS USING BAND-GAP CALCULATIONS

26/AA,AN,TI/10 (Item 1 from file: 399)
DIALOG(R)File 399:(c) 2003 American Chemical Society. All rts. reserv.

A study on a new structure of semiconductor-insulator-semiconductor (S(p+n)IS(n)) solar cell

26/AA,AN,TI/11 (Item 2 from file: 399)
DIALOG(R)File 399:(c) 2003 American Chemical Society. All rts. reserv.

Solar battery modules and solar battery-attached exterior insulating bodies
APPLICATION: JP 98752 (19980106)

26/AA,AN,TI/12 (Item 3 from file: 399)
DIALOG(R)File 399:(c) 2003 American Chemical Society. All rts. reserv.

Resinous materials for use as solar cell cover glass adhesive

```
?show files;ds
File 347:JAPIO Oct 1976-2003/May(Updated 030902)
         (c) 2003 JPO & JAPIO
File 351:Derwent WPI 1963-2003/UD,UM &UP=200360
         (c) 2003  Thomson Derwent
File 371:French Patents 1961-2002/BOPI 200209
         (c) 2002 INPI.  All rts. reserv.

Set      Items   Description
S1       36582   (SOLAR OR SUN()POWER?? OR PHOTOVOLTAIC)()(CELL OR BATTER??? OR AGGREGAT??? OR GATHER??? OR COLLECT???)
S2       62297   COLD()BOND OR BITUMINOUS OR BITUMEN? OR ASPHALT OR TAR OR TARRY OR RESINOUS
S3     1196324   ADHESIVE? ? OR FUS??? OR GLUE? ? OR CEMENT?? OR (STICK??? OR STUCK)()(TO OR TOGETHER) OR MUCILAGE OR MASTIC OR PASTE OR EPOXY
S4     2456353   (CABLE? ? (NOT 2N)(TV OR TELEVISION) NOT CATV) OR CORD? ? OR LINE? ? OR FILAMENT? ? OR WIRE? ? OR COAX OR CO()AX OR COAXIAL OR CO()AXIAL
S5     1637575   IMPERVIOUS OR IMPENETRABLE OR SEAL??? OR IMPERMEABLE OR PROOF OR NONPOROUS OR NON()POROUS OR PLUGG??? OR INSULAT???
S6     2609797   OPENING? ? OR HOLE? ? OR APERTURE? ? OR ORIFICE? ? OR GAP? ? OR INTERSTIC??? OR INTERSPACE? ?
S7        3663   S2(3N)S3
S8           0   S1(10N)S7
S9       85419   S5(3N)S6
S10       4131   S4(10N)S9
S11          0   S8(S)S10
S12          3   S1 AND S7
S13         40   S1 AND S2
S14         40   S12 OR S13
S15          0   S10(S)S14
S16          0   S10 AND S14
S17         20   S1(S)S2
S18          6   S1(10N)S2
S19          9   S12 OR S18
S20          5   S1(S)S10
S21         14   S19 OR S20
S22         14   IDPAT (sorted in duplicate/non-duplicate order)
S23         14   IDPAT (primary/non-duplicate records only)
```

23/3,K/2 (Item 2 from file: 351)
DIALOG(R)File 351:Derwent WPI

013402265 **Image available**
WPI Acc No: 2000-574203/200054
XRPX Acc No: N00-424892

Solar panel structure has elastic sealant disposed in the gap formed between surface coating materials coated on solar battery elements which are laid on base

Patent Assignee: MITSUBISHI JUKOGYO KK (MITO)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 2000174312	A	20000623	JP 98341409	A	19981201	200054	B

Priority Applications (No Type Date): JP 98341409 A 19981201
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 2000174312	A		14	H01L-031/042	

Abstract (Basic):
... Each **solar battery** element with positive and negative terminals is disposed between the base (1) and respective surface coating material (7). The elements are placed on the base via conductive **wire** and **insulating** sheet. The **gap** between coating materials is filled with elastic sealant (6).

23/3,K/3 (Item 3 from file: 351)
DIALOG(R)File 351:Derwent WPI

012567632
WPI Acc No: 1999-373739/199932
XRAM Acc No: C99-110445
XRPX Acc No: N99-279043

Solar cell module

Patent Assignee: CANON KK (CANO)
Inventor: INOUE Y; KATAOKA I; SASAOKA M; SHIOMI S; TOYOMURA F
Number of Countries: 030 Number of Patents: 008
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 929106	A2	19990714	EP 99100084	A	19990105	199932	B
JP 11193613	A	19990721	JP 98752	A	19980106	199939	
AU 9910022	A	19990729	AU 9910022	A	19990105	199941	
CN 1225513	A	19990811	CN 99100895	A	19990106	199950	
US 6072115	A	20000606	US 98221874	A	19981229	200033	
KR 99067755	A	19990825	KR 99132	A	19990106	200046	
KR 287089	B	20010416	KR 99132	A	19990106	200219	
AU 748083	B	20020530	AU 9910022	A	19990105	200247	

Priority Applications (No Type Date): JP 98752 A 19980106
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 929106	A2	E	16	H01L-031/048	
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
JP 11193613	A		13	E04D-013/18	
AU 9910022	A			H01L-031/05	
CN 1225513	A			H01L-031/042	
US 6072115	A			H01L-031/042	
KR 99067755	A			H01L-031/04	
KR 287089	B			H01L-031/04	Previous Publ. patent KR 99067755
AU 748083	B			H01L-031/05	Previous Publ. patent AU 9910022

Abstract (Basic):
Technology Focus:
... Preferred composition: The base material for the **solar cell** integrated cladding assembly is an **asphalt** type resin, a polystyrene type resin, a polyurethane type resin or a polyvinyl chloride type...

23/3,K/5 (Item 5 from file: 351)
DIALOG(R)File 351:Derwent WPI
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011566404 **Image available**
WPI Acc No: 1997-542885/199750
XRPX Acc No: N97-452217
Manufacturing method of solar battery **- by cutting off electrically conductive transparent film portion functioning as scribed-** line **to form** openings **, until** insulated **isolation of transparent film in which scribed-** line **are pinched**
Patent Assignee: SHARP KK (SHAF)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 9260704	A	19971003	JP 9671698	A	19960327	199750	B

Priority Applications (No Type Date): JP 9671698 A 19960327
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 9260704	A		5	H01L-031/04	

Manufacturing method of solar battery **- ...**

...**by cutting off electrically conductive transparent film portion functioning as scribed-** line **to form** openings **, until** insulated **isolation of transparent film in which scribed-** line **are pinched**

23/3,K/10 (Item 10 from file: 347)
DIALOG(R)File 347:JAPIO
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06338619 **Image available**
WIRING CONSTRUCTION OF SOLAR BATTERY PANEL

PUB. NO.: 11-280223 [JP 11280223 A]
PUBLISHED: October 12, 1999 (19991012)
INVENTOR(s): NISHIO KAZUNORI
FURUMOTO MASAO
APPLICANT(s): NATIONAL HOUSE IND CO LTD
APPL. NO.: 10-103377 [JP 98103377]
FILED: March 30, 1998 (19980330)

ABSTRACT

... prevent a lead wire from breaking down by receiving the lead wire connected to a **solar battery** panel in grooves provided along fitting rails supportingly fixing the **solar battery** panel.

SOLUTION: In the fitting rails 4 constituted of a longitudinal rail 2 and a lateral rail supporting a **solar battery** panel 1, the lead wire 6 connected to the panel 1 is received and arranged...

... case, rising pieces 9 forming the groove 5 of the rail 2 are provided with **holes** water- **sealed** by rubber packings, and the lead **wire** 6 connected to the panel 1 is arranged in the groove 5 through the holes...

23/3,K/11 (Item 11 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2003 JPO & JAPIO. All rts. reserv.

06034522 **Image available**
SOLAR CELL LAODED PANEL ROOF CONSTRUCTION, ROOF PANEL USED FOR ROOF CONSTRUCTION CONCERNED AND JOINT MEMBER

PUB. NO.: 10-317622 [JP 10317622 A]
PUBLISHED: December 02, 1998 (19981202)
INVENTOR(s): AOYAMA TETSUYA
APPLICANT(s): SEKISUI CHEM CO LTD [000217] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 09-132448 [JP 97132448]
FILED: May 22, 1997 (19970522)

ABSTRACT

... surfaces of roof boards of the roof panel members, steel plate setting beds 18 and **asphalt** roofings 17 are laid in lower spaces of the **solar cell** modules 14. A plurality of solar cell modules 14 are mounted on the roof boards...

23/3,K/12 (Item 12 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2003 JPO & JAPIO. All rts. reserv.

05886033 **Image available**
SOLAR CELL UNIT

PUB. NO.: 10-169133 [JP 10169133 A]
PUBLISHED: June 23, 1998 (19980623)
INVENTOR(s): NUNOMURA YUTAKA
APPLICANT(s): SEKISUI HOUSE LTD [400217] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 08-333560 [JP 96333560]
FILED: December 13, 1996 (19961213)

ABSTRACT

...the upper surface of the sheathing roof board of a battery mounting roof part through **asphalt** roofing and a **solar cell** frame 10 is mounted thereon. Further, the above is fixed by a bolt extending through...

23/3,K/14 (Item 14 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2003 JPO & JAPIO. All rts. reserv.

05609012 **Image available**
SOLAR CELL MODULE AND MANUFACTURING METHOD THEREOF

PUB. NO.: 09-223812 [JP 9223812 A]
PUBLISHED: August 26, 1997 (19970826)
INVENTOR(s): HAYASHI KATSUHIKO
ISHIKAWA ATSUO
YAMAGISHI HIDEO
APPLICANT(s): KANEGAFUCHI CHEM IND CO LTD [000094] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 08-026858 [JP 9626858]
FILED: February 14, 1996 (19960214)

ABSTRACT

...SOLUTION: A **solar cell** module 10 comprises an insulative board 14, one or more **solar cell** elements and power-collecting electrode wires 12

soldered on the board 14. It has a resin layer 22 which **seals** **gaps** 18 between the electrode **wires** 12 and board 14 and resin layer 36 which seals the entire surface of the...

23/AZ,TI/1 (Item 1 from file: 351)
DIALOG(R)File 351:(c) 2003 Thomson Derwent. All rts. reserv.

015446050
Roof lining board used as roof materials, has adhesion layer and coverings whose edge portion project along outward direction, and substrate whose edge portions when abutted and laid on roof serves as lapping margin

23/AZ,TI/2 (Item 2 from file: 351)
DIALOG(R)File 351:(c) 2003 Thomson Derwent. All rts. reserv.

013402265
Solar panel structure has elastic sealant disposed in the gap formed between surface coating materials coated on solar battery elements which are laid on base

23/AZ,TI/3 (Item 3 from file: 351)
DIALOG(R)File 351:(c) 2003 Thomson Derwent. All rts. reserv.

012567632
Solar cell module

23/AZ,TI/4 (Item 4 from file: 351)
DIALOG(R)File 351:(c) 2003 Thomson Derwent. All rts. reserv.

011671334
Photovoltaic solar roof or facade apparatus for solar farm - has Connection terminals connected to solar cell **via conductor and formed in direction according to cell circuit, connector socket being provided on other side to which electrical cables are connected from neighbouring solar cells**

23/AZ,TI/5 (Item 5 from file: 351)
DIALOG(R)File 351:(c) 2003 Thomson Derwent. All rts. reserv.

011566404
Manufacturing method of solar battery **- by cutting off electrically conductive transparent film portion functioning as scribed-** line **to form** openings **, until** insulated **isolation of transparent film in which scribed-** line **are pinched**

23/AZ,TI/6 (Item 6 from file: 351)
DIALOG(R)File 351:(c) 2003 Thomson Derwent. All rts. reserv.

011411807
Bench type garden fence with built-in illumination - includes pair of special section tubings installed as backrest and as seating, latter providing built-in solar cell charged battery powered lighting

23/AZ,TI/7 (Item 7 from file: 351)
DIALOG(R)File 351:(c) 2003 Thomson Derwent. All rts. reserv.

011198350
Light road rivet for vehicle - has charging capacitor which electrically charges solar battery based on feedback output of rectifying amplifier

23/AZ,TI/8 (Item 8 from file: 351)

DIALOG(R)File 351:(c) 2003 Thomson Derwent. All rts. reserv.

010522818
Semiconductor P-I-N solar photovoltaic cell module appts. - has polymeric material and asphalt **protective composite layer disposed between glass plate supported amorphous silicon** solar cell **, with P-I-N structure, and metal support**

23/AZ,TI/9 (Item 9 from file: 351)
DIALOG(R)File 351:(c) 2003 Thomson Derwent. All rts. reserv.

008661097
Heat-conductive embedding mix. - esp. for embedding heating system or solar collector **elements**

23/AZ,TI/10 (Item 10 from file: 347)
DIALOG(R)File 347:(c) 2003 JPO & JAPIO. All rts. reserv.

06338619
WIRING CONSTRUCTION OF SOLAR BATTERY PANEL

23/AZ,TI/11 (Item 11 from file: 347)
DIALOG(R)File 347:(c) 2003 JPO & JAPIO. All rts. reserv.

06034522
SOLAR CELL LAODED PANEL ROOF CONSTRUCTION, ROOF PANEL USED FOR ROOF CONSTRUCTION CONCERNED AND JOINT MEMBER

23/AZ,TI/12 (Item 12 from file: 347)
DIALOG(R)File 347:(c) 2003 JPO & JAPIO. All rts. reserv.

05886033
SOLAR CELL UNIT

23/AZ,TI/13 (Item 13 from file: 347)
DIALOG(R)File 347:(c) 2003 JPO & JAPIO. All rts. reserv.

05843377
RADIO COMMUNICATION EQUIPMENT

23/AZ,TI/14 (Item 14 from file: 347)
DIALOG(R)File 347:(c) 2003 JPO & JAPIO. All rts. reserv.

05609012
SOLAR CELL MODULE AND MANUFACTURING METHOD THEREOF

```
?show files;ds
File  9:Business & Industry(R) Jul/1994-2003/Sep 19
         (c) 2003 Resp. DB Svcs.
File 990:NewsRoom Current 2003/Sep 22
         (c) 2003 The Dialog Corp.
File  47:Gale Group Magazine DB(TM) 1959-2003/Sep 19
         (c) 2003 The Gale group
File 621:Gale Group New Prod.Annou.(R) 1985-2003/Sep 22
         (c) 2003 The Gale Group
File 636:Gale Group Newsletter DB(TM) 1987-2003/Sep 19
         (c) 2003 The Gale Group
File 148:Gale Group Trade & Industry DB 1976-2003/Sep 22
         (c)2003 The Gale Group
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         (c) 2003 McGraw-Hill Co. Inc
File 369:New Scientist 1994-2003/Sep W2
         (c) 2003 Reed Business Information Ltd.
File 370:Science 1996-1999/Jul W3
         (c) 1999 AAAS
File 483:Newspaper Abs Daily 1986-2003/Sep 19
         (c) 2003 ProQuest Info&Learning
File 484:Periodical Abs Plustext 1986-2003/Sep W2
         (c) 2003 ProQuest
File  95:TEME-Technology & Management 1989-2003/Aug W5
         (c) 2003 FIZ TECHNIK
File 141:Readers Guide 1983-2003/Aug
         (c) 2003 The HW Wilson Co
File 646:Consumer Reports 1982-2003/Sep
         (c) 2003 Consumer Union

Set     Items   Description
S1      14491   (SOLAR OR SUN()POWER?? OR PHOTOVOLTAIC)()(CELL OR BATTER???
              OR AGGREGAT??? OR GATHER??? OR COLLECT???)
S2      90683   COLD()BOND OR BITUMINOUS OR BITUMEN? OR ASPHALT OR TAR OR -
             TARRY OR RESINOUS
S3     584011   ADHESIVE? ? OR FUS??? OR GLUE? ? OR CEMENT?? OR (STICK??? -
             OR STUCK)()(TO OR TOGETHER) OR MUCILAGE OR MASTIC OR PASTE OR
             EPOXY
S4    8110589   (CABLE? ? (NOT 2N)(TV OR TELEVISION) NOT CATV) OR CORD? ? -
             OR LINE? ? OR FILAMENT? ? OR WIRE? ? OR COAX OR CO()AX OR COA-
             XIAL OR CO()AXIAL
S5     888578   IMPERVIOUS OR IMPENETRABLE OR SEAL??? OR IMPERMEABLE OR PR-
             OOF OR NONPOROUS OR NON()POROUS OR PLUGG??? OR INSULAT???
S6    1981216   OPENING? ? OR HOLE? ? OR APERTURE? ? OR ORIFICE? ? OR GAP?
             ? OR INTERSTIC??? OR INTERSPACE? ?
S7       2459   S2(3N)S3
S8          0   S1(10N)S7
S9       8950   S5(3N)S6
S10       453   S4(10N)S9
S11         0   S8(S)S10
S12      2812   S2(5N)S3
S13         0   S1(S)S12
S14      3398   S2(10N)S3
S15         0   S1(S)S14
S16        11   S1(S)S2
S17         0   S3 AND S16
S18         1   S1(S)S10
S19         1   S1(S)S4(S)S9
S20        12   S16 OR S19
S21        10   S20 NOT PY>2001
S22        10   S21 NOT PD=20010222:20031031
S23         8   RD (unique items)
```

23/3,K/4 (Item 1 from file: 621)
DIALOG(R)File 621:Gale Group New Prod.Annou.(R)

01405316 Supplier Number: 46550817 (USE FORMAT 7 FOR FULLTEXT)
TEP ANNOUNCES REVOLUTIONARY BREAKTHROUGH IN SOLAR TECHNOLOGY
News Release, pN/A
July 17, 1996
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 770

(USE FORMAT 7 FOR FULLTEXT)
TEXT:
...in the development and manufacturing of state-of-the-art photovoltaic (PV) materials. Unlike conventional **solar cell** materials such as crystalline silicon, the unique feature of Global Solar's ingenious product is...

...sources. Global Solar's manufacturing process utilizes Copper Indium Diselenide (ClS), a new class of **solar cell** materials (photovoltaics). This material consists of four extremely thin film layers. The center two layers...

...placed in the sun, and the top and bottom layers remove the electricity from the **solar cell** similar to the positive and negative posts of a common battery. Each layer of the...

...projected to be less than one year as compared to 5-10 years for existing **solar cell** technologies. The facility is expected to begin mass-producing the solar modules by June 1997...

...CIS arrays are ideal for residential and commercial rooftop mounting in a fashion similar to **asphalt** shingles. ClS will blend in with the rest of the roof creating a natural, environmentally...

23/3,K/5 (Item 1 from file: 369)
DIALOG(R)File 369:New Scientist

00122024 16221847.500 (USE FORMAT 7 OR 9 FOR FULLTEXT)
Hot tarmac
GREENWOOD, NIGEL; London
New Scientist, vol. 162, no. 2184, p. 60
May 1, 1999
LANGUAGE: English RECORD TYPE: Fulltext DOC. TYPE: Journal
WORD COUNT: 51

(USE FORMAT 7 OR 9 FOR FULLTEXT)
TEXT: ...AA="16221822.40 (This Week, 17 April, p 17)). A Dutch firm "has found that **asphalt** is an excellent **solar collector** ".
In fact, glider pilots have for years been soaring in the thermals generated by roads...

23/3,K/8 (Item 2 from file: 484)
DIALOG(R)File 484:Periodical Abs Plustext

01354494 (USE FORMAT 7 OR 9 FOR FULLTEXT)
Sunroof for houses
Uehling, Mark D
Popular Science (GPOS), v242 n1, p37, p.1
Jan 1993

ISSN: 0161-7370 JOURNAL CODE: GPOS
DOCUMENT TYPE: News
LANGUAGE: English RECORD TYPE: Fulltext; Abstract
WORD COUNT: 238 LENGTH: Short (1-9 col inches)

TEXT:

The world of roofing has not had many new ideas since thatch: **Tar** paper and cedar shingles alike are laid down in the same overlapping layers preferred by...

...a more modern approach. Built of glass tile and protective film, it doubles as a **solar cell** .

Sanyo has developed amorphous silicon that generates twice as much photovoltaic energy as crystalline silicon...

23/AA,AN,TI/1 (Item 1 from file: 9)
DIALOG(R)File 9:(c) 2003 Resp. DB Svcs. All rts. reserv.

1374361 Supplier Number: 01374361
MITI To Support Reclamation Of Desert In Saudi Arabia

23/AA,AN,TI/2 (Item 1 from file: 47)
DIALOG(R)File 47:(c) 2003 The Gale group. All rts. reserv.

04830478 SUPPLIER NUMBER: 19802466
Race paving 101. (race track construction)

23/AA,AN,TI/3 (Item 2 from file: 47)
DIALOG(R)File 47:(c) 2003 The Gale group. All rts. reserv.

02441618 SUPPLIER NUMBER: 02912814
Pakistan makes major import changes: 122 items are added to the 'free list.'

23/AA,AN,TI/4 (Item 1 from file: 621)
DIALOG(R)File 621:(c) 2003 The Gale Group. All rts. reserv.

01405316 Supplier Number: 46550817
TEP ANNOUNCES REVOLUTIONARY BREAKTHROUGH IN SOLAR TECHNOLOGY

23/AA,AN,TI/5 (Item 1 from file: 369)
DIALOG(R)File 369:(c) 2003 Reed Business Information Ltd. All rts. reserv.

16221847.500 (USE FORMAT 7 OR 9 FOR FULLTEXT)
Hot tarmac

23/AA,AN,TI/6 (Item 2 from file: 369)
DIALOG(R)File 369:(c) 2003 Reed Business Information Ltd. All rts. reserv.

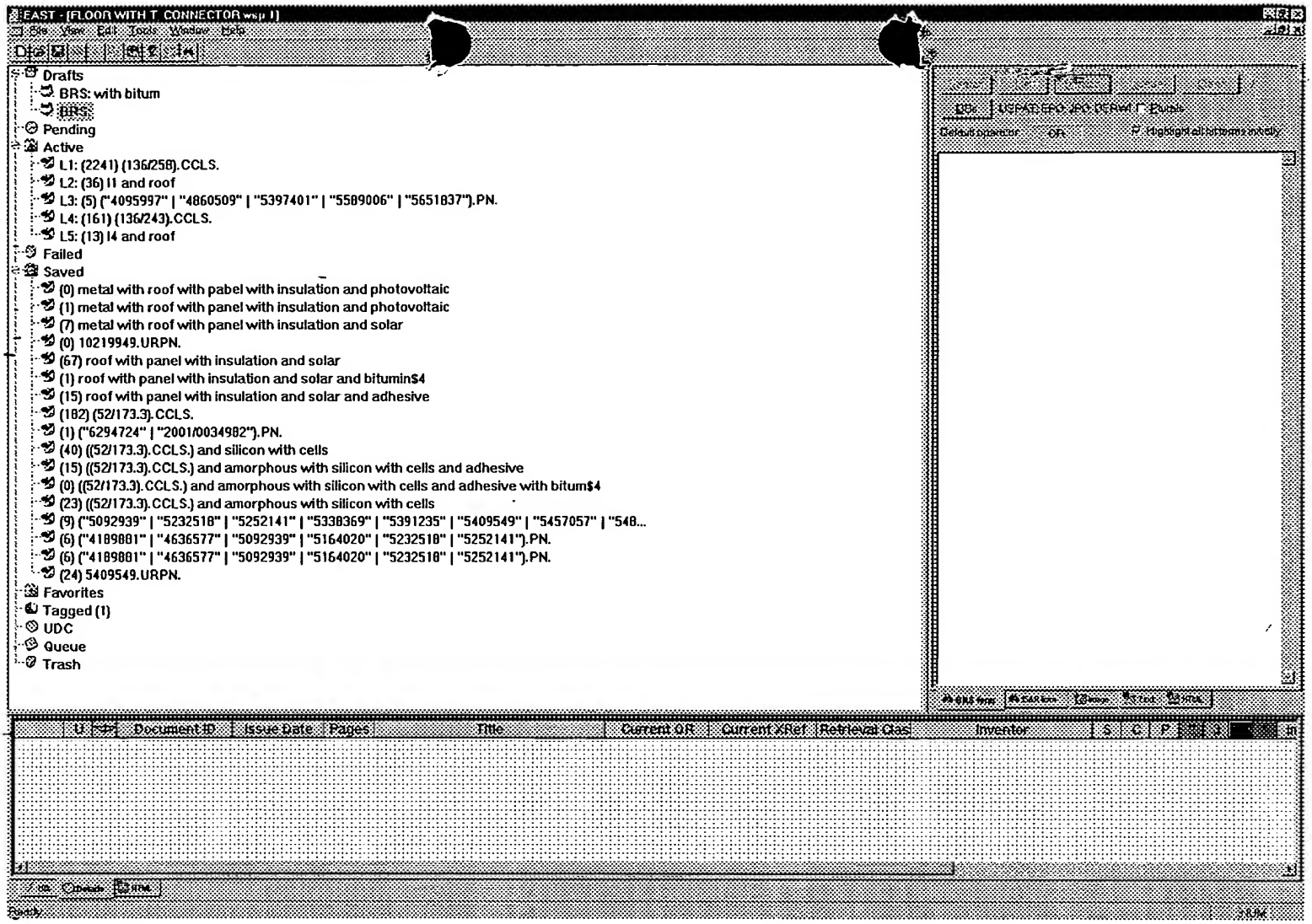
16221822.400 (USE FORMAT 7 OR 9 FOR FULLTEXT)
Burning tarmac

23/AA,AN,TI/7 (Item 1 from file: 484)
DIALOG(R)File 484:(c) 2003 ProQuest. All rts. reserv.

03948535
A submersible light sensor for aquatic ecology

23/AA,AN,TI/8 (Item 2 from file: 484)
DIALOG(R)File 484:(c) 2003 ProQuest. All rts. reserv.

01354494
Sunroof for houses


EAST - [FLOOR WITH T CONNECTOR.wsp 1]
File View Edit Tools Window Help
Drafts
BRS: with bitum
BRS:
Pending
Active
L1: (2241) (136/258).CCLS.
L2: (36) I1 and roof
L3: (5) ("4095997" | "4860509" | "5397401" | "5589006" | "5651837").PN.
L4: (161) (136/243).CCLS.
L5: (13) I4 and roof
Failed
Saved
(0) metal with roof with pabel with insulation and photovoltaic
(1) metal with roof with panel with insulation and photovoltaic
(7) metal with roof with panel with insulation and solar
(0) 10219949.URPN.
(67) roof with panel with insulation and solar
(1) roof with panel with insulation and solar and bitumin$4
(15) roof with panel with insulation and solar and adhesive
(182) (52/173.3).CCLS.
(1) ("6294724" | "2001/0034982").PN.
(40) ((52/173.3).CCLS.) and silicon with cells
(15) ((52/173.3).CCLS.) and amorphous with silicon with cells and adhesive
(0) ((52/173.3).CCLS.) and amorphous with silicon with cells and adhesive with bitum$4
(23) ((52/173.3).CCLS.) and amorphous with silicon with cells
(9) ("5092939" | "5232518" | "5252141" | "5338369" | "5391235" | "5409549" | "5457057" | "548...
(6) ("4189881" | "4636577" | "5092939" | "5164020" | "5232518" | "5252141").PN.
(6) ("4189881" | "4636577" | "5092939" | "5164020" | "5232518" | "5252141").PN.
(24) 5409549.URPN.
Favorites
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Default Operator
OR
Highlight all hit terms initially
U
Document ID
Issue Date
Pages
Title
Current OR
Current XRef
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Corus Bausysteme GmbH - Netscape

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Bookmarks Location: http://www.kalzip.com/uk/

705 DBs Adv AltaV Adv GoogleGrps Content Mgt Freshness Google IPC codes IT Supp Mech DBs Timesheet Up USPTO Wkly WayBack

Kalzip

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roof and wall cladding

Welcome to Corus Bausysteme GmbH

On our website you will find interesting information about Kalzip®, the innovative aluminium roof and wall cladding system. Architects from all over the world highly esteem Kalzip® as a variable, high-quality comprehensive solution for the cladding of buildings. Kalzip® has been setting standards for more than three decades.

New items besides detailed information about our range of products are a database for constructional features and a global reference database showing exciting Kalzip® projects.

Click through the world of Kalzip®.

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August-Horch-Str. 20-22
56070 Koblenz
Germany

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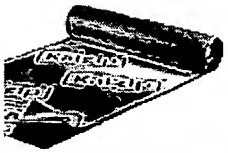
Document: Done



Kalzip® vapour barrier

The Kalzip® vapour barrier is a cold-bond self-adhesive bituminous elastomer va lock system comprising an alkali resistant aluminium combi-inlay. The production pr and self-control are certificated according to EN ISO 9001.

Advantages

- Cold-bond self-adhesive elastobitiminous vapour lock layer
- Alcali-resisting aluminium combi-inlay
- step-solid
- Suitable as emergency sealing
- Troublefree and neat application
- Safe application

Range of application

The Kalzip® vapour lock is applied as a vapour barrier on steel trapezoidal roofs acc to the "Flachdachrichtlinie" of the ZVI or according to the "abc der Bitumenbahnen" vdd.

INTERNET ARCHIVE
WayBackMachine

Enter Web Address: http://

Searched for http://www.kalzip.com 11 Results

* denotes when site was updated.

Search Results for Jan 01, 1996 - Sep 25, 2003

1996	1997	1998	1999	2000	2001	2002	2003
0 pages	0 pages	0 pages	0 pages	1 pages	3 pages	6 pages	1 pages
				Oct 31, 2000 *	May 18, 2001 * Sep 26, 2001 Nov 29, 2001	May 30, 2002 * Jun 04, 2002 Aug 02, 2002 Sep 27, 2002 Nov 24, 2002 Nov 30, 2002	Feb 18, 2003

46 5053
Naoko Slack
3635

26/3,K/8 (Item 2 from file: 6)
DIALOG(R)File 6:NTIS
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0058729 NTIS Accession Number: N66-11228/XAB
Investigation of Resinous Materials for Use as Solar Cell Cover Glass Adhesive
Haynos, J. G.
National Aeronautics and Space Administration. Goddard Space Flight Center, Greenbelt, Md.
Report No.: NASA-TM-X-55333; X-716-65-369
Sep 65 19p
Journal Announcement: USGRDR6401; STAR0402
Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
NTIS Prices: PC A02/MF A01

Investigation of Resinous Materials for Use as Solar Cell Cover Glass Adhesive
Descriptors: **Adhesive** ; *Glass; *Polymer; *Solar cell; *Space environment; Bonding; Cell; Condition; Cover; Environment; Launch; Material ; Orbital; Prelaunch...

(1)

26/3,K/10 (Item 1 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)
(c) 2003 American Chemical Society. All rts. reserv.

135275308 CA: 135(19)275308h **JOURNAL**
A study on a new structure of semiconductor-insulator-semiconductor (S(p+n)IS(n)) solar cell
AUTHOR(S): Debnath, Doyananda; Khan, Mohammad Rezaul Huque
LOCATION: Department of Physics, University of Chittagong, Chittagong, Bangladesh, 4331
JOURNAL: J. Bangladesh Acad. Sci. DATE: 2001 VOLUME: 25 NUMBER: 1
PAGES: 1-8 CODEN: JBACDF ISSN: 0378-8121 LANGUAGE: English
PUBLISHER: Bangladesh Academy of Sciences

26/3,K/11 (Item 2 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)
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131103124 CA: 131(8)103124w **PATENT**
Solar battery modules and solar battery-attached exterior insulating bodies
INVENTOR(AUTHOR): Inoue, Yuji; Shiomi, Tetsu; Sasaoka, Makoto; Toyomura, Fumitaka; Kataoka, Ichiro
LOCATION: Japan,
ASSIGNEE: Canon K. K.
PATENT: Japan Kokai Tokkyo Koho ; JP 99193613 A2 ; JP 11193613 DATE: 19990721
APPLICATION: JP 98752 (19980106)
PAGES: 13 pp. CODEN: JKXXAF LANGUAGE: Japanese CLASS: E04D-013/18A; E04D-003/40B; H01B-003/44B; H01L-031/042B

(2)

26/3,K/12 (Item 3 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)
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66086326 CA: 66(20)86326h **TECHNICAL REPORT**

Same doi as #1

...ous materials for use as solar cell cover glass adhesive

...HOR(S): Haynos, Joseph G.
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Encyclopedia of Materials, Parts, and Finishes

Second Edition

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The fusible alloys are used in many ingenious ways, e.g., sprinkler-system triggering devices, bending pipes, anchoring tools during machining, accurate die patterns, etc.

Bismuth metal (0.1%) is also added to cast iron and steel to improve machinability and mechanical properties. An alloy of 50% bismuth and 50% lead is added to aluminum for screw machine stock, to increase machinability.

A permanent magnet (bismanol) with excellent resistance to demagnetization is produced from manganese and bismuth.

The development of refrigerating systems depending on the Peltier effect for cooling uses a bismuth–tellurium or selenium alloy for thermocouples. Bismuth telluride is used extensively for thermoelectric cooling and for low-temperature thermoelectric power production.

Bismuth is playing an important role in nuclear research. Its high density gives it excellent shielding properties for gamma rays while its low thermal neutron capture cross section allows the neutrons to pass through. For investigations in which it is desired to irradiate objects, i.e., animals, with neutrons but protect them from gamma rays, castings of bismuth are used as neutron windows in nuclear reactors.

Bismuth has been proposed as a solvent-coolant system for nuclear power reactors. The bismuth dissolves sufficient uranium so that, when the solvent and solute are pumped through a moderator (graphite), criticality is reached and fission takes place. The heat generated from the fission reaction raises the temperature of the bismuth. The heated bismuth is then pumped to conventional heat exchangers producing the steam power required for eventual conversion to electricity.

The advantages of such a reactor are that (1) it has potential for producing low-cost power, (2) it has an integrated fuel processing system, and (3) it converts thorium to fissionable uranium.

Another important use of bismuth is in the manufacture of pharmaceutical compounds. Various bismuth preparations have been employed in the treatment of skin injuries, alimentary diseases, such as diarrhea and ulcers, and syphilis. The oxide and basic nitrate are perhaps the most widely used compounds of bismuth. The trioxide is used in the manufacture of glass and ceramic products, and the basic nitrate is used in the porcelain painting to fire on gilt decoration.

BITUMINOUS COATINGS

Bitumens have been defined as mixtures of hydrocarbons of natural or pyrogenous origin or combinations of both (frequently accompanied by their nonmetallic derivatives), which can be gaseous, liquid, semisolid, or solid and which are completely soluble in carbon disulfide.

Bitumens used in the manufacture of coatings are of the semisolid and solid variety and are derived from three sources:

1. Asphalt produced by the distillation of petroleum
2. Naturally occurring asphalts and asphaltites
3. Coal tar produced by the destructive distillation of coal

It is customary to classify bituminous coatings by their application characteristics as well as by their generic composition. All of the coatings can be divided into two classes depending on whether or not they require heating prior to application.

1. *Hot-applied coatings.* These are either 100% bitumen or bitumen blended with selected fillers. A common loading for coatings employing fillers is 10 to 20% filler. Hot-applied coatings are brought to the desired application viscosity by heating. The majority of buried pipelines are coated with this type of bituminous coating.
2. *Cold-applied coatings.* These employ both solvents and water to attain the desired application viscosity. A wide range of solvents is used and the choice depends mainly on the drying characteristics desired and the solvent power required to dissolve the particular bitumen being used. Various fillers are also used in cold-applied coatings to obtain specific applications and end-use properties.

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Bituminous coatings can be formulated from many combinations of bitumens, solvents, or dispersing agents and fillers. This makes possible a great variety of end products to meet application and service requirements. The coatings that can be produced range from thin-film (3-mil) coatings to protect machined parts in storage, up to thick (100-mil), tough coatings to protect buried pipelines.

As with all other coatings, the conditions of the surface to which a bituminous coating is applied is an important, life-determining factor. A good sandblast is preferred, especially if the surface is badly corroded and the exposure is severe. In any case the surface should be free of moisture, grease, dust, salts, loose rust, and poorly adherent scale. A thin, penetrating bituminous primer can be beneficial on rusty surfaces that can only be cleaned by wire brushing and scraping.

End-Use Requirements

The application will dictate which performance properties of a coating should be given greatest consideration.

Service Temperature

Many applications of bituminous coating require a moderate service temperature range, often no greater than that caused by weather changes. However, other applications, such as coatings for chemical processing vessels, may require much wider service temperature ranges. In any event, it is possible to obtain good performance with bituminous coatings over a range of –73 to 163°C.

Thermal and Electrical Insulation

Bitumens themselves are relatively poor thermal insulators. However, by using low-density fillers, coatings with good insulation properties can be formulated. These coatings both protect from corrosion and provide thermal insulation. An added advantage of the coatings is that the insulating material (low-density filler) is completely surrounded by bitumen and is permanently protected from moisture. Thus, they are not subject to a loss in efficiency (as are conventional insulating systems) from damage or failure of the protecting vapor barrier.

Bitumens are naturally good electrical insulators. This is an important consideration in systems using cathodic protection as a complementary corrosion-prevention device.

Abrasion Resistance

Many bituminous coatings need to have high abrasion resistance. Automotive undercoatings, for example, need high abrasion resistance because they are continually buffeted by gravel and debris thrown up by the wheels of the vehicle.

Abrasion-resistant coatings are also used to protect interior surfaces of railroad cars or other vessels handling chemical solids or abrasive slurries.

Weathering Resistance

Asphalt-base bituminous coatings generally weather better than coal-tar-base coatings. Also, there is quite a wide difference in the performance of asphalt coatings derived from different petroleum crudes. By critically selecting the crude and the processing method, asphalt coatings can be formulated that will weather for many years.

In industrial areas, corrosive solids, solutions, and vapors will affect weathering performance. In general, the resistance of bituminous coatings to corrosive media is equal to that of the best organic coatings. Bituminous coatings have good resistance to dilute hydrochloric, sulfuric, and phosphoric acids as well as to sodium hydroxide. They also have good resistance to solutions of ammonium nitrate and ammonium sulfate. However, they have poor resistance to dilute nitric acid, and most coatings are not resistant to oils, greases, and petroleum solvents.

Mechanical Impact and Thermal Shock

Bituminous coatings generally have good adhesion when subjected to mechanical impact. However, where severe mechanical impact is expected, the coatings should first

be field-tested or tested in the laboratory under simulated service conditions.

Resistance to thermal shock is an important consideration in coatings used on some types of processing equipment. Laboratory tests in which a coated panel is transferred back and forth between hot and cold chambers can be used to predict field behavior. Bituminous coatings are available that will withstand thermal shock over a temperature range of –51 to 60°C.

Types of Coatings

Because bitumens are very dark in color, heavy loadings of pigments are required to produce colors other than black. However, if color is an important consideration, certain colored paints, including whites, can be used as topcoats. Granules can also be blown into the coating before it has completely cured to produce a wide range of decorative effects.

Thin-Film Coatings

Coatings less than 6 mils thick are arbitrarily included in this group. For the most part, these are solvent cutback coatings. They are black except in the case of aluminum paints employing bituminous bases. The coatings are inexpensive and can be used to give good protection from corrosion when color is not important.

Asphalt coatings of this type are used extensively to protect machined parts in storage. Because the coatings retain their solubility in low-cost petroleum solvents even after long weathering, kerosene or similar solvents can be used to remove a coating from the protected part just prior to placing it in service. Coal-tar-base coatings are much more difficult to dissolve and cannot be used for this purpose. However, this property makes coal tar useful for protecting crude-oil tank bottoms and in other applications requiring resistance to petroleum fractions.

Industrial Coatings

Heavy-bodied industrial coatings incorporate low-density and fibrous mineral fillers. Coatings can be formulated that will not slump or flow on vertical surfaces when applied as thick as 250 mils. However, they are usually used in thicknesses from 6 to 120 mils.

The coatings are used extensively in industrial plants to protect tanks and structural steel from such corrosive environments as acids, alkalis, salt solutions, ammonia, sulfur dioxide, and hydrogen sulfide gases.

Industrial coatings are also used in large volume by the railroad industry. Complete exteriors of tank cars carrying corrosive liquids are often coated and provide good protection of the saddle area where spillage is likely to occur. Coatings on the exteriors and interiors of hopper cars in dry chemical service also provide protection from both corrosive action and abrasive wear.

Railroad car bituminous cements are used to seal sills and joints in boxcars. An application of this material followed by an overcoating of granules makes an excellent roofing system for railroad cars.

Coatings for Use over Insulation

Practically all industrial insulating materials must be protected from the weather and moisture; otherwise they would lose their efficiency. Bituminous coatings formulated to have low rates of moisture vapor transmission give best results on installations operating at low (–73°C) to moderate (82°C) temperatures. Coatings that allow a higher rate of moisture transmission (breathing type) are needed to protect the insulation on systems operating at 82°C and above. This is necessary so that moisture trapped beneath the coating can escape when the unit is brought to operating temperatures.

Thermal Insulating Coatings

Low-density fillers can be employed in bituminous mastics to produce coatings with relatively good insulating values; a k value of 0.6 Btu/ft²/h/°F is typical. Insulating coatings are usually applied somewhat more thickly than conventional mastics to obtain the insulating value desired. They are commonly used in thicknesses of 250 to 375 mils and because of their thickness and resiliency they have excellent resistance to mechanical damage.

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Automotive Underbody Coatings

These are mastic type coatings containing fibrous and other fillers. They are used to coat the undersides of floor panels, fenders, gasoline tanks, and frames to protect against corrosion and provide sound deadening and joint sealing.

The coatings have high resistance to deicing salts, moisture, and water. They also have sound-deadening properties that noticeably reduce the noise level inside an automobile. This provides for a more pleasant and less-fatiguing ride. The sealing and bridging action of the coatings is also especially effective in reducing drafts and dust infiltration.

Sound-Deadening Coatings

High-efficiency, sound-deadening coatings can be formulated from selected resinous bases and high-density fillers. They have better sound-deadening properties than automotive underbody coatings and are used on the wall, roof, and door panels of automotive equipment where sound deadening is the primary need, rather than abrasion resistance or protection from corrosion. They are also used on railroad passenger cars, house trailers, stamped bathtubs, kitchen sinks, air-conditioning cabinets, and ventilation ducts.

Pipe Coatings

Industrial coatings are excellent for protection of pipe above ground. However, the environment of underground exposure and the complementary use of cathodic protection make it necessary to use specially designed coatings. The stresses created by shrinking and expanding soil require that the coating be very tough. Rocks and other sharp objects can be expected to cause high localized pressures on the coating surface. A coating must have good cold-flow properties to resist penetration by objects, which can cause localized pressures as high as 690 MPa.

Cathodic protection (an impressed negative electrical potential) is widely used to prevent the corrosion processes from occurring at flaws in the pipe coatings. Both asphalts and coal tars are good electrical insulators and make excellent coatings for cathodic protection applications.

Coatings for pipe are usually of the hot application type. Application can be made at the mill, at a special pipe-coating yard, or over the ditch, depending on the terrain, size of pipe, and other factors. The coating may be given added strength by embedding it with a glass fabric while it is still hot. Outer wrappings of rag, asbestos, and glass felts are sometimes used to give added resistance to damage by soil stresses.

Application

Bituminous coatings that are cut back with solvents or emulsified with water can be produced to consistencies suitable for application by dipping, brushing, spraying, or troweling at ambient temperatures.

- Dipping is usually used to coat small parts. As a rule, coating viscosity is adjusted to produce a thickness of 1 to 6 mils.
- Brushing is used on areas that cannot be reached by spraying and on jobs that do not warrant setting up spray equipment. Coating thicknesses can range from 1 to 65 mils.
- Spraying is the most popular method for applying cold coatings. The thickness required in one application determines the consistency of the formulation, and thicknesses of 1 to 250 mils are obtainable by spraying. Conventional paint-spray equipment can be used for coatings up to 6 mils thick. Heavier coatings require the use of mastic spray guns fed from pressure pots or heavy-duty pumps. Heated vessels and feed lines can also be used to decrease viscosity and permit faster application and the buildup of thicker films in one application.
- Troweling is usually used in inaccessible areas or where it is necessary to produce a very heavy coating in one application. Trowel coats are usually applied in thicknesses above 250 mils.

Bituminous coatings can also be applied hot without the need for any diluents. Such coatings

are widely used on piping in thicknesses of about 95 mils. They are heated to 177 to 288°C and then pumped into a special apparatus that surrounds and travels along the pipe.

BLOW MOLDING

Essentially, blow molding involves trapping a hollow tube of thermoplastic material in a mold. Air pressure applied to the inside of the heated tube blows the tube out to take the shape of the mold. There are many variations on the basic technique.

In short, the process is an economical high-speed, high-production-rate method of forming thermoplastic parts of hollow shape, or parts that can be simply made from a hollow shape.

Uses include the container and toy field, where bottles and toys of many different shapes are formed in large quantities at low cost. The most commonly used material is polyethylene (PE).

Although any thermoplastic resin can be considered a candidate for blow molding, PE was the first used when blow molding started with low-density PE for blow-molded squeeze bottles. Now, low-, intermediate-, and high-density PE resins are used, as well as special ethylene copolymers designed to provide greatly improved stress cracking resistance compared with PE homopolymers, needed for detergent containers.

One of the main criteria of selection of a PE resin for blow molding is the proper balance of physical properties required for the specific use.

With the extension of blow molding into broader use in industrial products, the need for engineering properties other than those of PE has stimulated interest in other thermoplastics. The main plastics available for blow molding, other than PE, include cellulosics, polyamides (nylons), polyacetals, polycarbonates, polypropylene, and vinyls.

The cellulosic family of plastics includes acetate, butyrate, propionate, and ethyl cellulose. For blow molding, the cellulosics offer strength, stiffness, transparency, and high surface gloss. They have unlimited color possibilities. Chemical resistance and availability of nontoxic resins make them potentially suitable for medicine and food packaging. Their strength, stiffness, and transparency make them suitable for industrial parts, toys, and numerous decorative and novelty items.

Polyamides or nylons, although relatively high cost materials, offer potential benefits in industrial parts and special containers, such as aerosols. Special developments have resulted in formulations tailored to special viscosity requirements for blow molding.

Polyacetal resins for blow molding offer toughness, rigidity, abrasion resistance, high heat distortion temperatures, and excellent resistance to organic solvents. Also, they are resistant to aliphatic and aromatic hydrocarbons, alcohols, ketones, strong detergents, weak organic acids, and to some weak inorganic bases. Aerosol containers are another application for blow molding.

Polycarbonates have found their place in blow-molded industrial parts. Primarily they offer high toughness, strength, and heat resistance. They are transparent with almost unlimited colorability and are self-extinguishing.

Polypropylenes, somewhat similar to higher-density PEs, but with lower specific gravity, higher rigidity, strength and heat resistance, and lower permeability, offer interesting properties at low cost. Because of their lower permeability they are used in containers where PE is unsuited. They also have excellent stress-crack resistance.

PVC (polyvinyl chloride) for blow-molded parts offers benefits in terms of variability of engineering properties. PVCs are available with properties ranging all the way from high rigidity in the unplasticized grades to highly flexible plasticized PVCs. The variability in performance resulting from the many possible formulations means that engineers must consult with the materials supplier in attempting to obtain a formulation with the proper performance and processing characteristics to meet their needs.

The scope of blow-molded design has already broadened beyond that of round hollow objects. Production of such parts as housings by blowing a unit and sawing the item along the parting line to produce two housings is already a reality. As many as ten cavities have been incorporated into a mold, using a wide tube and allowing air to pass through a hollow sprue or runner system between parts.